

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 4-8, 17-18 and 23-26 are presently active; Claims 1-3, 12, and 14 were previously canceled without prejudice; Claims 9, 10, 11, 13, 16, 19, 20, 21 and 22 have been presently canceled without prejudice; Claims 4 and 6 have been presently amended to include the subject matter of Claim 16 and to provide further clarifications; and Claims 25 and 26 have been added. The amendments are supported by page 13, lines 15-26, of the specification and Figure 3. No new matter has been added.

In the outstanding Office Action, Claims 4, 6-8, 14, 15, 17, and 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al (JP 63278322) in view of Arami et al (U.S. Pat. No. 5,904,872) and in view of Toya et al (U.S. Pat. No. 6,407,371). Claims 4, 6-15, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al in view of Arami et al (U.S. Pat. No. 5,904,872) in view of Saito et al (U.S. Pat. No. 6,369,361). Claims 4-10, 15, 17, and 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al in view of Li et al (U.S. pat. No. 6,449,536) in view of Arami et al and Toya et al. Claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al in view of Arami et al and Toya et al and further in view of Takahashi et al (U.S. Pat. No. 6,254,687). Claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al in view of Arami et al and Toya et al and further in view of Tay et al (U.S. Pat. Appl. Publ. No. 2003/0094446). Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takagi et al in view of Saito et al and Arami et al and further in view of Tay et al.

Claim Summary: Claim 4 presently recites:

4. A mounting table, comprising:
a heating unit including a reflector plate made of an opaque quartz,
and a quartz tube welded to a surface of the reflector plate, and
a mounting table cover member installed to cover the reflector plate, a
target object being mounted thereon,
wherein the mounting table cover member is made of a light
absorbing material, and a carbon wire which generates heat when a current is
applied thereto is disposed between the reflector plate and the mounting table
cover member,
wherein the mounting table cover member has a circular lid shape and
an inner surface of a sidewall of the mounting table cover member has a
diameter greater than a diameter of the reflector plate so that the inner surface
of the sidewall of the mounting table cover member is in contact with a side
surface of the reflector plate to be circumscribed thereto,
*wherein a positioning projection having a ring-shape and made of a
same material as that of the reflector plate is provided in an upper direction
at a peripheral region of the reflector plate and positions the mounting table
cover member which is inserted by the positioning projection, the
positioning projection contacting with the mounting table cover member.*
[Emphasis added.]

Thus, Claim 4 defines a heating unit including a reflector plate made of an opaque quartz, and a quartz tube welded to a surface of the reflector plate. Because of the welded construction, the recited quartz tube does not have to have exact surface processing performed in order for the quartz to combine with the reflector plate.

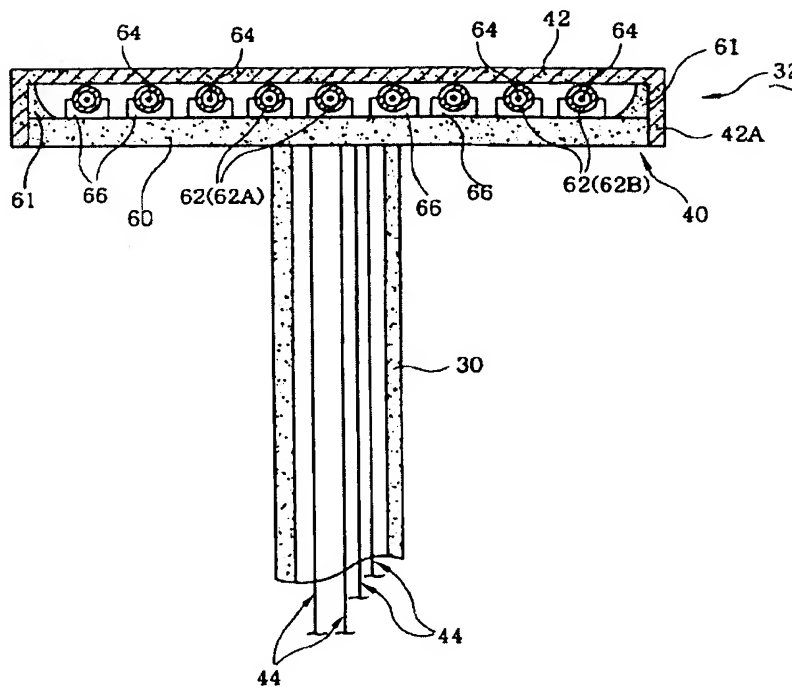
Claim 4 also defines a mounting table cover member 1) which is made of a light absorbing material, and 2) which has a circular lid shape. Further, Claim 4 defines a carbon wire disposed between a reflector plate and the mounting table cover member and defines that an inner surface of a sidewall of the mounting table cover member has a diameter greater than a diameter of the reflector plate so that the inner surface of the sidewall of the mounting table cover member is in contact with a side surface of the reflector plate to be circumscribed thereto.

Furthermore, the mounting table includes a positioning projection having a ring-shape and made of a same material as that of the reflector plate provided in an upper direction at a peripheral region of the reflector plate and positions the mounting table cover member which

is inserted by the positioning projection. The positioning projection contacts with the mounting table cover member.

For the sake of illustration, Applicant's Figure 3 is reproduced below showing one illustrative example of the claimed positioning projection by way of the depicted element 61 which contacts mounting table cover member 42A.

FIG. 3



Particularly, since the positioning projection having a ring shape and made of the same material as that of the reflector plate is provided in an upper direction at a peripheral region of the reflector plate to contact with the mounting table cover member 42, the positioning projection 61 not only positions the mounting table cover member 42, but also functions to transfer heat efficiently from the heater to the inner surface of the peripheral region of the mounting table cover member 42 (wafer W side). Moreover, the mounting table

cover member 42 which is made of heat absorbing material and supports the wafer absorbs the heat via the positioning projection to transfer heat to peripheral region of the wafer.

Applicant submits that the features of Claim 4 (and independent Claim 6), when considered as a whole and when considered for their unique advantages, are not obvious in view of the applied art.

Art Deficiencies: Regarding the features of Claims 4 and 6, the Office Action asserted that the mounting table cover member previously defined corresponds to cover 3 of Takagi et al. However, for cover 3 of Takagi et al to encapsulate the whole heater inside the quartz cases 3, machined planar quartz surfaces for the cover 3 are thermally bonded together. In this case, the quartz surfaces need to be machined to an acceptable flatness. That is, the surface processing of quartz is needed to controlled to a high accuracy and acceptable degree of flatness. These processes in Takagi et al do not disclose or suggest a quartz tube welded to a surface of the reflector plate, as recited in Claim 4.

Further, although the Office Action asserts on page 6 that the claimed positioning projection is described in Takahashi et al. Applicant disagrees with that assertion.

A section of Figure 1 of Takahashi et al is reproduced on the next page for the sake of convenience to illustrate the details of element 16 of Takahashi et al, which the Office Action cited in rejecting former Claim 16. Element 16 of Takahashi et al is described therein as cover plate 16 placed over the grooves 14. Element 17 in Figure 1 which the Examiner may be construing as the claimed positioning projection is described in Takahashi et al as being a sealing member. See col. 3, lines 27-29. However, there is no description in Takahashi et al that sealing member 17 is made of the same material as the as that of the reflector plate, as defined in Claim 4. Moreover, sealing member 17 is not located where it would position either the base unit of heater unit 5 or cover plate 16. Rather, it is the respective shapes of the

all words in a claim must be considered in judging the patentability of the claim against the prior art.

Accordingly, given these deficiencies in the art, the 35 U.S.C. § 103(a) rejections should be removed, and Claims 4 and 6 (and the claims dependent therefrom) should be passed to allowance.

Conclusion: In view of the present amendment and in light of the above discussions, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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